

Purpose: To provide a brief overview of current experimental facilities employed by ARL for robotics related research



Robotics Research Facility at Fort Indiantown Gap, PA

TECHNOLOGY DRIVEN. WARFIGHTER FOCUSED.

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Indoor Experimental Facility at ARL Adelphi, MD Laboratory Center

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Robotics Research Facility at Aberdeen Proving Ground, MD

Purpose: To provide off-road and urban like environments for development of robotics related technology



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Provides laboratory space and training area facilities for the purpose of conducting research experiments and demonstrations with unmanned air and ground systems and vehicles.



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Agreement

- Memorandum of Agreement between Pennsylvania National Guard and the Army Research Laboratory
- FTIG support and services provided through intra-service agreement funded by ARL



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- Headquarters of the Pennsylvania National Guard
- Consist of over 17,000 acres of ranges and training areas
- Conducts a variety of Officer and Enlisted training courses



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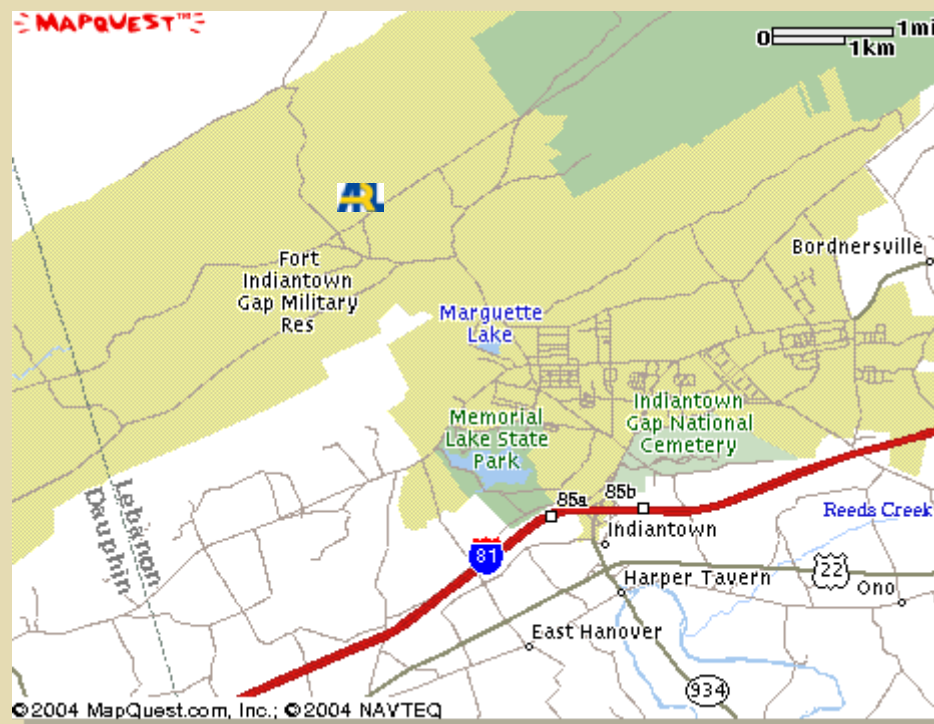
- The facility is located on the Northeastern portion of Ft Indiantown Gap



- The facility is located on the North Western portion of Ft Indiantown Gap
- Constructed in 2001



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- ARL support contractor serves as facility manager



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- Building contains:
- nine research offices with telephone and internet access



- **Building contains:**
- **nine research offices with telephone and internet access**
- **a conference/meeting room with full audio visual capabilities**



- Building contains:
- nine research offices with telephone and internet access
- a conference/meeting room with full audio visual capabilities
- a high bay for robotic systems research, maintenance and storage



TECHNOLOGY DRIVEN. WARFIGHTER FOCUSED.

- Combined Arms Combat Training Facility (CACTF)
- Urban environment for troop training located approximately 1 kilometer distant containing
 - Road network
 - Buildings (interior/exterior)
 - Tunnels/ sewer systems
- Phase 1 to be completed in Spring 2009



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- Indoor and outdoor Research Facility for small robot technology development

The Man-Portable Robotics Laboratory facility

- 24'x30' laboratory space

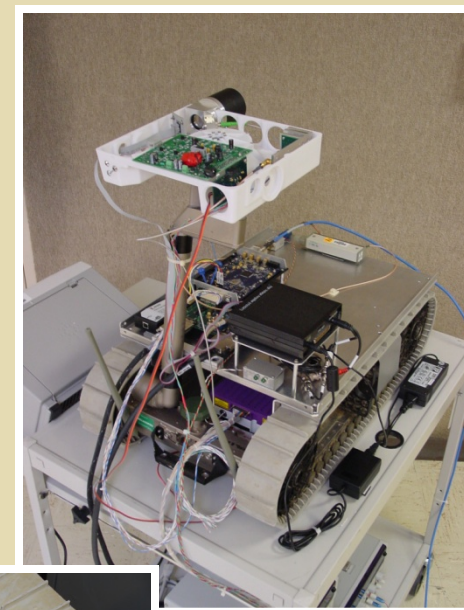
The outdoor facility at ARL ALC represents an urban environment where experiments can be conducted and data can be collected outside the lab environment.

- Two 60' x 50' trailers w/ stairs, doors, windows and interior offices
- Reconfigurable obstacles



An array of small robot platforms with sensor and electronic payloads:

- Packbot Explorer
- ATRVs
- Controllers
- RCbot
- Scout (U Minn)



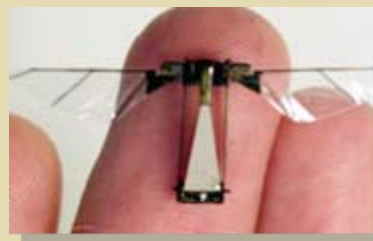
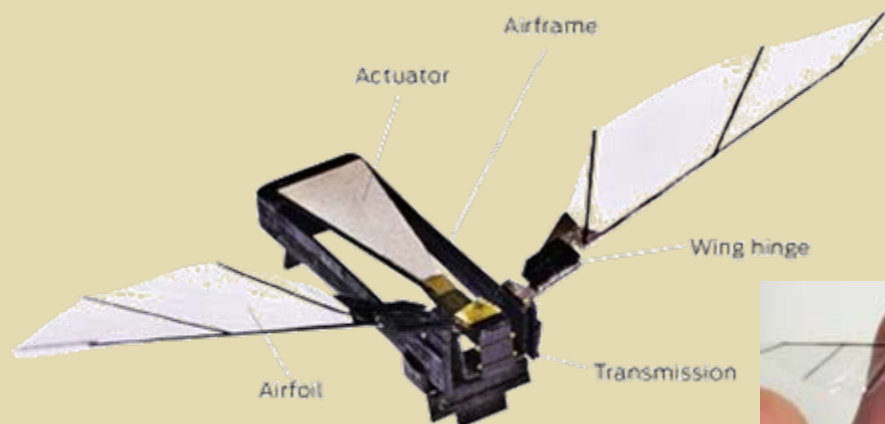
- Indoor Research Facility for small robot, Micro Systems, and UAV technology development



- An array of autonomous small robots, micro robotics, and UAVs
- Sensor packages
Mission packages



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Wood – Harvard 2008

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- **ARL offers collaborators extensive experimental research facilities at:**
 - **Ft. Indiantown Gap, PA**
 - Rolling wooded terrain
 - Urban terrain (interior & exterior)
 - **Aberdeen Proving Ground, MD**
 - ARL facilities
 - Working relationships with Aberdeen Test Center
 - **Adelphi, MD**
 - Indoor Small Robot Experimental Facility
- **It has a wide array of experimental testbeds: from backpackables to large unmanned systems**



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